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Notice of Allowability	Application No.	Applicant(s)	
	09/516,274	AQUARO ET AL.	
	Examiner	Art Unit	
	Tuan N. Nguyen	2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- 1. ☒ This communication is responsive to 09/02/2004.
- 2. ☒ The allowed claim(s) is/are 1-3,5-10 and 12-16.
- 3. ☒ The drawings filed on 01 October 2002 are accepted by the Examiner.
- 4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 - 1. ☐ Certified copies of the priority documents have been received.
 - 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

- 5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 - 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
- 7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>4/11/05</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

1 An examiner's amendment to the record appears below, to the amended claims 1, 4, 8, 11, 15, should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Kevin M. Mason (Attorney for Applicant, Reg. No. 36,597) on 04/11/2005.

In the claims:

1. **(Currently Amended)** A multimode tapered structure for coupling a multimode laser to a multimode fiber, comprising:

an input end having an elliptical cross section for coupling with said multimode laser; and an output end having a circular cross section for coupling with said multimode fiber, wherein said multimode tapered structure is tapered from a smaller dimension at said input end to a larger dimension at said output end.

4. **(Canceled).**

8. **(Currently Amended)** An optical coupling system, comprising:

a multimode laser source having a rectangular aperture;

a multimode fiber having a core surrounded by a cladding; and

a multimode tapered structure for coupling said multimode laser to said multimode fiber, said multimode tapered structure having an input end and an output end, said input end

having an elliptical cross section for coupling with said multimode laser and said output end having a circular cross section for coupling with said multimode fiber, wherein said multimode tapered structure is tapered from a smaller dimension at said input end to a larger dimension at said output end.

11. **(Canceled).**

15. **(Currently amended)** A method of coupling a multimode laser to a multimode optical fiber, said method comprising the steps of:

generating a multimode laser beam in a multimode laser source having an aperture; and
positioning a multimode tapered structure to face said laser aperture, said multimode tapered structure coupling said multimode laser to said multimode fiber, said multimode tapered structure having an input end and an output end, said input end having an elliptical cross section for coupling with said multimode laser and said output end having a circular cross section for coupling with said multimode optical fiber, wherein said multimode tapered structure is tapered from a smaller dimension at said input end to a larger dimension at said output end.

REASON FOR ALLOWANCE

Allowable Subject Matter

2. The following is an examiner's statement of reasons for allowance - Applicant's response filed on 09/02/2004 has been considered, with respect to amended claims 1, 8, 15, and

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16, the references of the record fail to teach or suggest the optic coupling device and method of fabricating thereof:

Claims 1, 8, 15, 16:

A multimode coupler structure for coupling multimode laser to multimode fiber comprising an input end is elliptical cross section having smaller dimension then the output end where the output end is circular in cross section in coupling with multimode fiber.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Communication Information

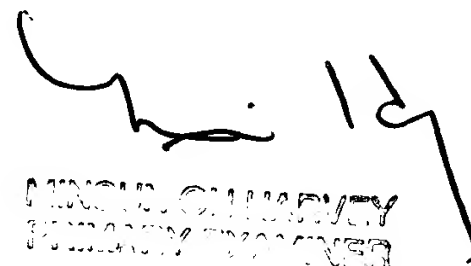
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan N Nguyen whose telephone number is (571) 272-1948. The examiner can normally be reached on M-F: 7:30 - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harvey Minsun can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tuan N. Nguyen

A handwritten signature in black ink, appearing to read "Tuan Nguyen", with a long horizontal stroke extending to the left.A handwritten signature in black ink, appearing to read "Tuan N. Nguyen", with a long horizontal stroke extending to the right. Below the signature is a rectangular stamp containing the text "TUN N. NGUYEN" and "PATENT ATTORNEY".